



C2 Systems Overview



Purpose



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**The purpose of this brief is
to provide an understanding
of various C2 systems
employed by the Marine
Corps and how they
enhance the commander's
warfighting capability.**



C2 SYSTEMS

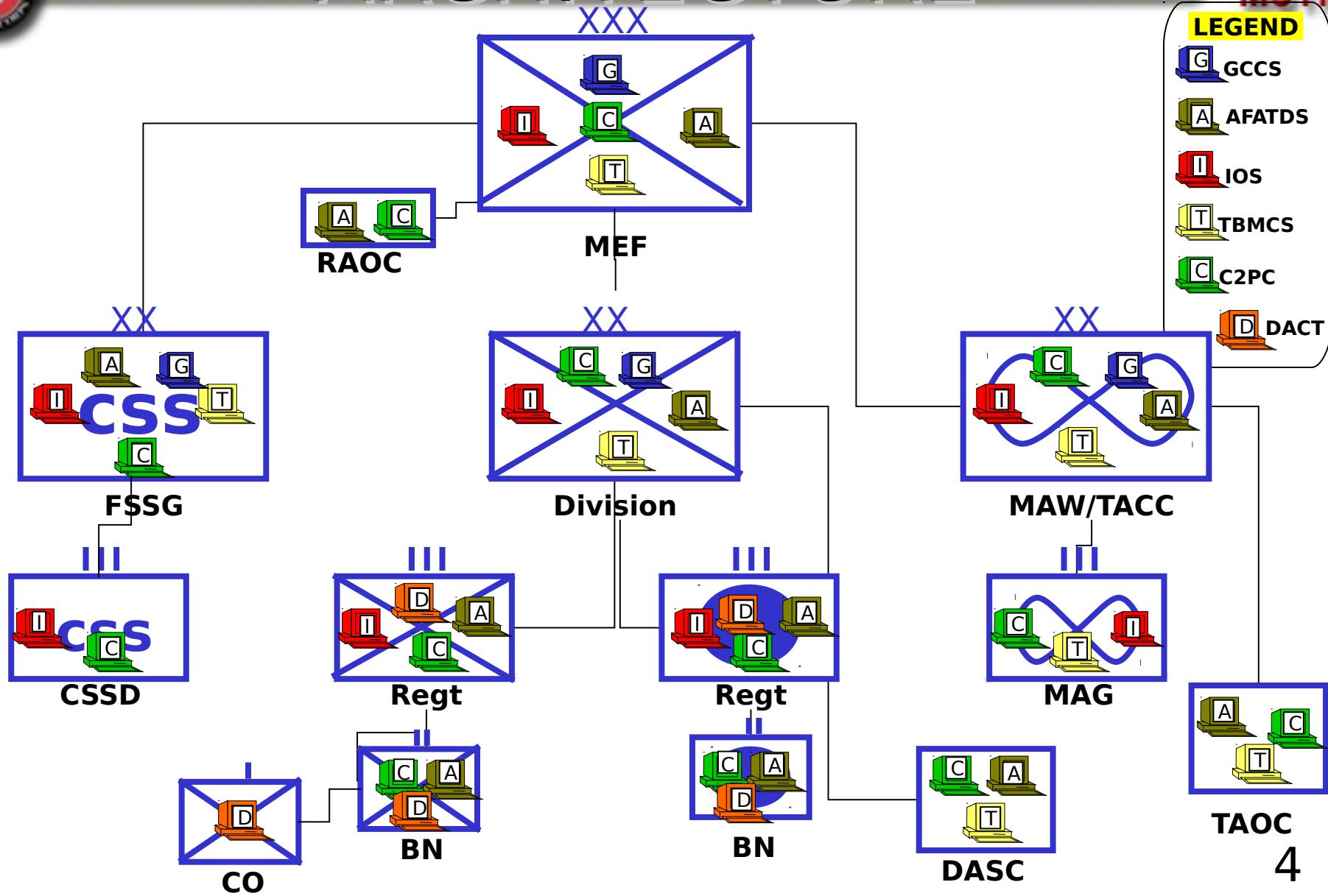
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- C2 Systems We'll Cover:
 - Global Command & Control System (GCCS)
 - Intelligence Operations Server v1 (IOSv1)
 - Intelligence Operations Server v2 (IOSv2)
 - MEF Intelligence Analysis System (MEF IAS)
 - Command & Control Personal Computer (C2PC)
 - Data Automated Communications Terminal (DACT)
 - Advanced Field Artillery Tactical Data System (AFATDS)
 - Automated Deep Operations Coordination System (ADOCS)
 - Theatre Battle Management Core System (TBMCS)

C2 SYSTEM ARCHITECTURE



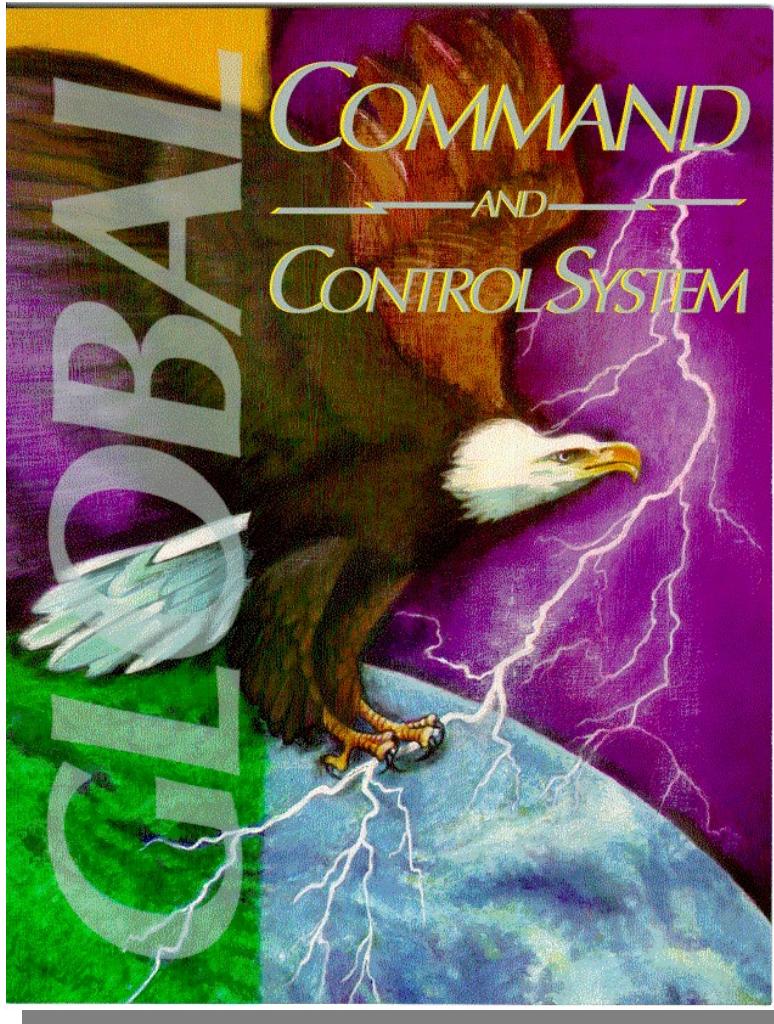
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GLOBAL COMMAND & CONTROL SYSTEM



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GCCS Variants

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- GCCS-J (Joint) Joint Chiefs/DISA
- GCCS-M (Maritime) Navy
- GCCS-A (Army) Army
- GCCS-AF (Air Force) Air Force
- GCCS-K (Korea) ROK/Army
- GCCS-T (Top Secret) DISA
- GCCS/IOS USMC

(Intelligence Operations System)



Commonality

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- UB – Unified Build & Core Segments.
 - CST – COP Synch Tools
 - Provide Common Operational Picture functionality.
 - JMTK – Joint Mapping Tool Kit.
 - Standardized mapping functionality.
 - Consistent track and chart representation.



GLOBAL COMMAND & CONTROL SYSTEM

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- Two Primary Areas of Functionality:
 - **Force Deployment Planning and Execution**
 - **Joint Operational Planning and Execution System (JOPES)**
 - Deliberate Planning
 - Crisis Action Planning & Execution
 - **Situational Awareness**
 - **Acts as Joint Track Database Manager (Top COP)**
 - **Acts as Joint MIDB (Modernized Integrated Database) Server**
 - **Fuses, displays and disseminates products, information, and reports from all active elements of the battle space in both the Joint and Multi-National arena's**



GCCS CLIENT



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- Message Handling
 - SIPRNET Access
 - News Groups
 - Secret Web (E-Mail, Homepages, etc)
 - Automated Message Handling System
 - Microsoft Office Products
- Situational Awareness
 - C2PC





IOS v1 & v2

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- V1 = *Operations* component of the MAGTF C4I software baseline
- V2 = *Intelligence* component of the MAGTF C4I software baseline
- Provides the ability to receive, fuse, select and display information from many sources, and disseminate selected information throughout the battlespace
- Specs:
 - Sun Netra T1125
 - Two 36 GB Ultra-SCSI HD
 - Two 440 MHZ CPU(s) Ultra-Sparc-II
 - 1 GB RAM
 - Solaris 2.5.1





CAPABILITIES



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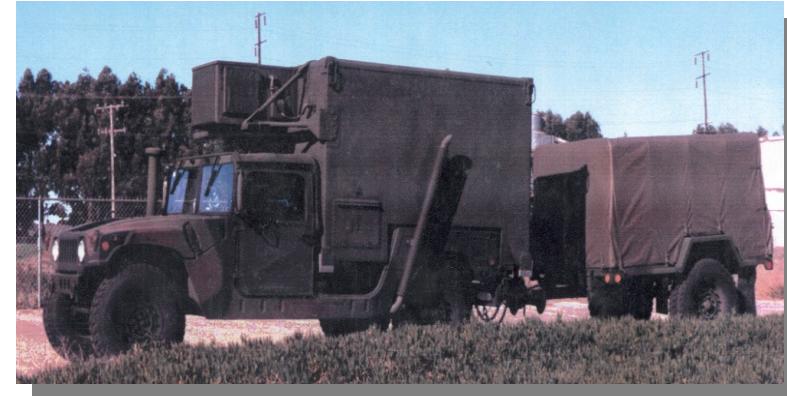
- Display enemy/friendly situations
 - MIDB
 - TDBM
- Digital Overlays
 - Collection plan
 - FSCM
- Interface with
 - GCCS
 - AFTADS
 - TBMCS
 - C2PC
 - ADOCS

MEF IAS



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- Mobile Intelligence Operations Center
- Highly mobile, shelterized unit
- AN/UYQ-69(V)1, AN/UYQ-69(V)2, JOTS-1, JOTS-19, JOTS 14

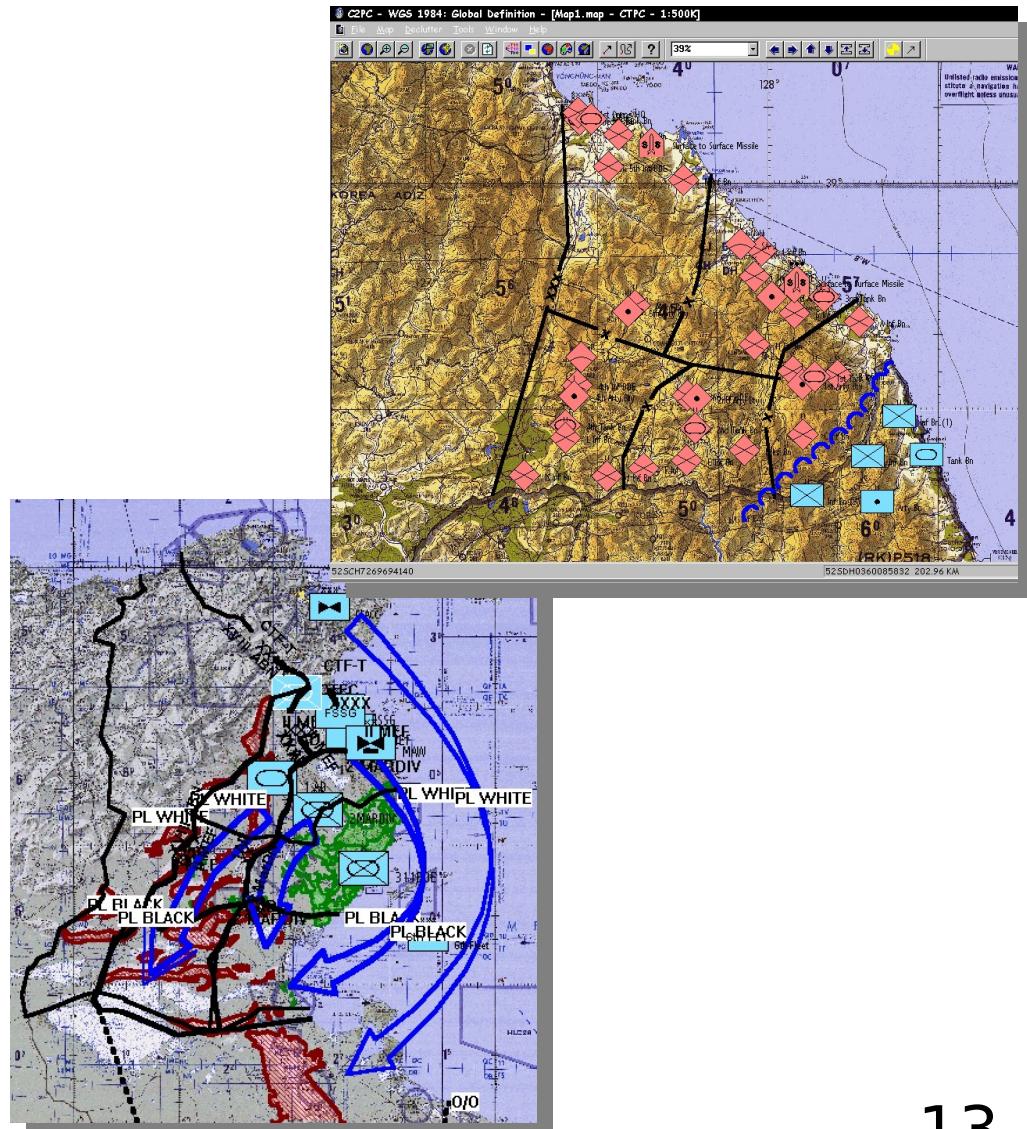


COMMAND & CONTROL PC



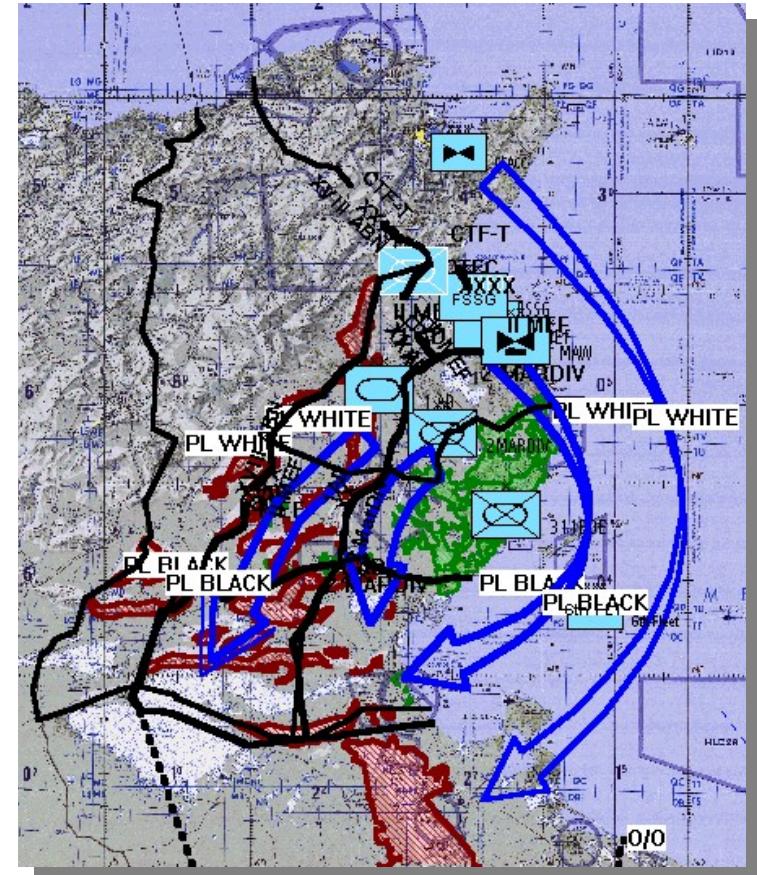
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- Client software for IOS
- Users: Intelligence, Ops, Air, Logistics, Fires
- Provides the ability to display, manipulate and dynamically update the Common Tactical Picture in a Windows friendly environment to facilitate real time reporting.
- Ability to display Operational Graphics
 - Overlays
 - Operationally Templating
 - Maneuver Graphics
 - Planning
 - Routes
 - Symbols
 - Tracks





- Planning
- Wargaming
- Operational Graphics

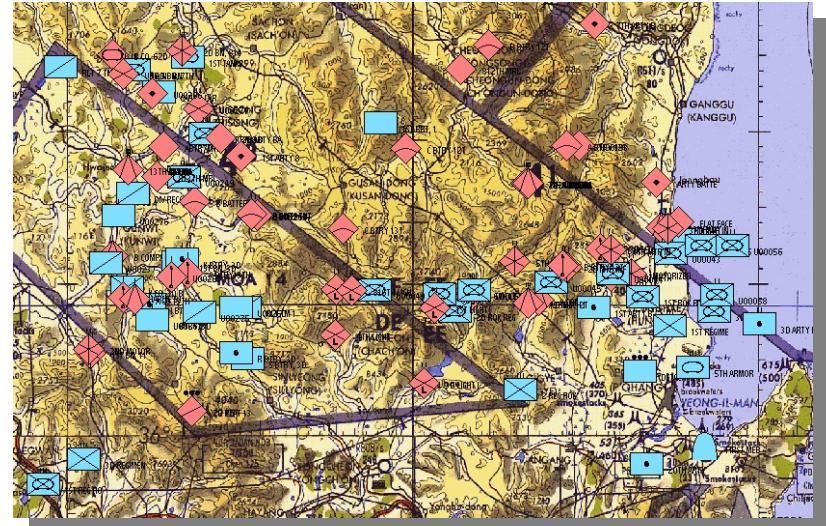


TRACKPLOT



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- Current Situation
- Dynamic
- CTP “Common Tactical Picture”



DACT



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- Ruggedized handheld computer (RHC) running Command & Control Compact Edition (C2CE) and Microsoft Windows Software.
- Two Types
 - Mounted (M-DACT)
 - Dismounted (D-DACT)
- The DACT will allow lower echelon commanders the ability to maintain situational awareness of the battlefield.
- Ability to display and manipulate Operational Graphics.





Advanced Field Artillery Tactical Data System





ATTRIBUTES



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- **Fire Support component of the MAGTF C4I software baseline**
- **A multi-service automated Command & Control System designed for Fire Support Operations that Integrates Fire Support Coordination with Tactical Fire Direction**
- **AFATDS Provides**
 - Integrated responsive and reliable fire support
 - A means to input detailed attack guidance and criteria
 - Display & dissemination of current friendly and enemy situations
 - A database which supports continuity of operations
 - Interface with local and wide area networks
- **Can interface with:**
 - IOS v1
 - IOS v2
 - TBMCS
 - GCCS



FUNCTIONALITY

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- **Fire Support Planning**
- **Fire Support Execution**
- **Fire Support Coordination**
- **Movement Control**
- **Unit Management & Logistics**
- **Situational Awareness**



Automated Deep Operations Coordination System



ADOCS

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- Provides an integrated set of tools
 - Data management
 - Analysis
 - Mission planning
 - Coordination
 - Execution
 - Targeting
 - Fire Support
 - Intelligence
- System Requirements
 - Windows NT/2000
 - 128 MB RAM
 - 4 GB Free HD space
 - 500 MHz Processor



THEATER BATTLE MANAGEMENT CORE SYSTEMS



TBMCS



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Air Command and Control component of the MAGTF C4I software baseline.

TBMCS provides the air commander with the means to plan, direct, and control all theater air operations in support of command objectives and to coordinate with ground and maritime elements engaged in the same operation.



TBMCS PROVIDES



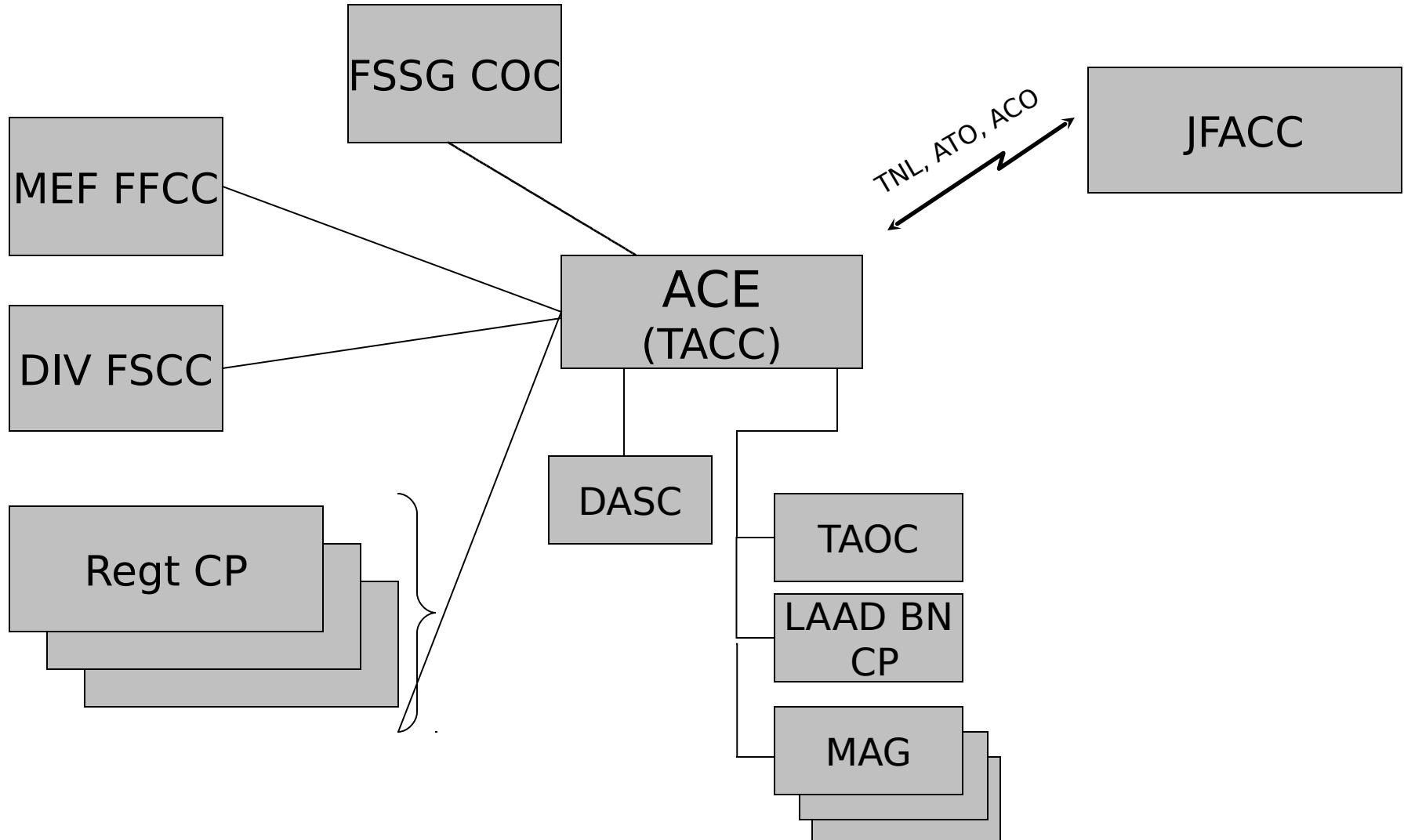
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- ATO and ACO production
- Air Battle Planning
- Air Battle Execution Management
- Situation and target analysis
- Enemy-course-of-action prediction
- Collection-management support
- Maintains local Order-of-Battle and threat databases
- Air Defense Artillery and Friendly Unit Aircraft Reports
- Surface Command and Control Reports
- Missiles, Mission, Base Reports
- Verify effective utilization of offensive, defensive and support assets
 - Verify that mission support needs are satisfied
 - Manage and de-conflict Airspace
 - Generate, change and monitor the Airspace Control Order
 - Verify the consistency and completeness of the Air Battle Plan and
- Air Tasking Order

TBMCS IN THE MEF



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TBMCS IN THE TACC



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- Prepare/Request MAGTF airspace
- Prepare/Submit Target Nomination List
- Prepare USMC Direct Support ATO
- Monitor/Update execution of ATO
- Generate reports

TBMCS IN THE DASC

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- Receive/Update MEF Battlefield Geometry (via AFATDS interface)
- Receive GCE ASRs (via AFATDS)
- Process Immediate Air Requests
- Receive/Monitor/Update the ATO
- Friendly Order of Battle (FrOB) Display
- Limited EOB display via MIDB query

TBMCS REMOTES IN THE MAGTF



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- Remote Workstations Throughout the MAGTF (TAOC, GCE, FSSG, ATC, etc.)
- Receive, monitor, and update the execution of the ATO
- View, sort, parse the ATO/ACO (AAT)
- Functionality:
 - Execution Management Control (EMC)
 - Execution Management Reports (EM-Reports)
 - ATO/ACO Tool (AAT)



IBMCS COMMON APPLICATIONS

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- Internet Relay Chat (IRC): Public chat room
- TK Talk: “Point to Point”, Chat on Demand Chat Program
- Distribution List Management: Address book for User Alerts
- User Alerts: Similar to CTAPS System Message Alerts (SMA's)
- Netscape Email: Internet Email
- IRIS: USMTF Message Handler

CONTACT INFO



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